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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/484,316	01/18/2000	Goro Asahi	5000-4723	9561

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EXAMINER

SENGI, BEHROOZ M

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/484,316

Applicant(s)

ASAHI ET AL.

Examiner

Behrooz Senfi

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) g.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 - 19, are rejected under 35 U.S.C. 103(a) as being unpatentable over Myers (US 4,214,266) in view of Shimizu et al (6,223,847).

Regarding claim 1, Myers '266 discloses a camera for capturing image of an area behind the vehicle (i.e. fig. 1, camera 30) and a monitor for displaying the image captured by the camera (i.e. fig. 3, monitor 34) and the guide marking for aiding steering and marking and the image being simultaneously displayed on the monitor when the vehicle is being driven in reverse (i.e. figs. 3 and 4, col. 3, lines 56+) and marking provides a driver with at least first indication of the width of the vehicle (i.e. col. 3, lines 61+).

Myers '266 fails to explicitly teach marking and prospective path of the vehicle corresponding to the position of the steered wheels.

However, the above claimed limitations are well-known in the prior art of the record as evidenced by Shimizu '847, in particular (i.e. figs. 2(A), 3, 5 and col. 2, lines 31+) teaches markings on the vehicle and the path corresponding to the position of the steered wheels to ensure that a driver can easily and correctly stop the vehicle at the starting position.

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Taking the combined teaching of Myers '266 and Shimizu '847 as a whole, it would have been obvious to display prospective path of the vehicle corresponding to the position of the steered wheels as taught by Shimizu '847 to ensure that a driver can easily and correctly stop the vehicle at the starting position (col. 1, lines 35 – 37).

Regarding claims 2 – 9, 11, 12 and 15, combination of Myers '266 and Shimizu '847 teaches detector for detecting the position of steered wheels (i.e. col. 3, lines 30 – 40 of Shimizu '847) and the display control unit calculates the prospective path assuming that the vehicle is moved in reverse, on the basis of information from the detector, and wherein the marking is displayed according to the width of the vehicle (reads on fig. 2A, col. 2, lines 27+ and col. 3, lines 30+ of Shimizu '847) where teaches plurality of marking which are used in aiding the vehicle for parking purpose on the display and controller 22, for controlling the operation of display based on the markings and also controlling the operation of the steering actuator and made suggestion of calculation on the basis of the positional relationship (i.e. col. 7, lines 44 – 47) for the purpose of reverse parking, and the marking defines by two points that are spaced a part approximately by the width of the vehicle in claim 4, (reads on fig. 2a, markers 24 R and 24L). Furthermore, applicant invention is directed to having markers along the path for guiding the vehicle driven in reverse for the purpose of parallel or reverse parking. Shimizu '847 does not show the marking along the path, however acknowledgement is made of having markers on the path (i.e. col. 1, lines 53 – 55) and considered that insufficient, and for the purpose of

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enhancement and convenience placed the markers on the vehicle for serving the same subject matter. As for calculating the path using polar coordinates and wherein the end mark is determined by a radial line, and also prospective path is circular as in claims (8, and 9); as discussed above, Shimizu '847 provides markers on the vehicle and calculate the movement of the vehicle base on the positional relationship (i.e. col. 1, lines 41 – 43, and col. 7, lines 44 – 45), and acknowledgement is made of having markers on the path is unnecessary and insufficient, therefore calculation of prospective path using polar coordinates or prospective path is circular consider as an obvious design preference over the the prior art Shimizu '847, and the claimed determining the steering speed (claims 11 and 12) is inherent function and necessitated by the process of vehicle automatic steering.

Regarding claim 10, combination of Myers '266 and Shimizu '847 teaches control unit shifts the indication of the prospective path (i.e. col. 3, lines 39 – 41 of Shimizu).

Regarding claim 13, combination of Myers '266 and Shimizu '847 teaches indicia are displayed in color (i.e. col. 3, lines 26 – 27 of Myers).

Regarding claim 14, the limitations claimed are substantially similar to claim 1, therefore the grounds for rejecting claim 1, also apply here. For additional limitation backing while keeping the steered wheels turned at their maximum angle (reads on i.e. fig. 1, the graph on the bottom of the page, where shows the traveling distance relative to the steering angle of the wheel, for

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reverse parking right and left, the steered wheels with respect to the distance and also figs. 2A and 3, col. 2, lines 32 – 35 of Shimizu).

Regarding claims 16 and 17, combination of Myers '266 and Shimizu '847 teaches display includes a first marking used when performing parallel parking to the left (reads on fig. 2a, and col. 4, lines 23+ of Shimizu) where teaches reverse parking in left mode and also in right mode, and as for selectively display the marking depending on whether the vehicle is to be parked to the left or to the right (in claim 17, reads on col. 2, lines 1+ of Shimizu) where teaches the manual switch for desired movement.

Regarding claim 18, combination of Myers '266 and Shimizu '847 teaches vehicle has obstruction detectors for detecting an obstruction existing near the front corners of the vehicle, and wherein the display control unit displays the presence of the obstruction; fig 1, of Shimizu '847 teaches plurality of sensors and detector used around the vehicle including cameras which can be viewed in the display and also can be controlled through a manual switch as discussed above, and it meets the limitation as claimed.

Regarding claim 19, the limitations claimed are substantially similar to claim 1, therefore the grounds for rejecting claim 1, also apply here. As for additional limitation causing the vehicle to proceed on a route when the vehicle is driven so that the guide display is positioned at a center of the route. Shimizu '847 teaches markers provided on the vehicle for aligning the vehicle in a center position.

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Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 1, 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Shimizu et al. (US 6,223,847).

Regarding claims 1 and 14, Shimizu '847 discloses an apparatus for Aiding steering (i.e. fig. 1), including a camera for capturing an image of an area behind the vehicle (i.e. fig. 1, object detecting means S6, television camera, which are mounted on the rear portion of the vehicle) and a monitor for displaying the image captured by the camera (i.e. fig. 1, stage display unit 11), and a display control unit for displaying a guide marking for aiding steering, the marking and the image being simultaneously displayed on the monitor when the vehicle is being driven in reverse, wherein the marking provides a driver with at least first indication of the width of the vehicle and a second indication corresponding to the position of the steered wheels (figs. 2A, 3 and 5, markers 24, which indicates the width of the vehicle, col. 4, lines 11, controller 22, which controls the operation of display unit 11 and steering operation and also steering wheels (col. 3, lines 34+)), and the guide marking that is fixed at a predetermined position with respect to the monitor for aiding a driver in parking (claim 14), reads on (i.e. figs.

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2A and 3, making 24) and backing while keeping the steered wheels turned at their maximum angle (claim 14), reads on (i.e. fig. 1, the graph on the bottom of the page, where shows the traveling distance relative to the steering angle of the wheel, for reverse parking right and left, the steered wheels with respect to the distance and also figs. 2A and 3, col. 2, lines 32 – 35).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(703)305-0132**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Chris Kelley** can be reached on **(703)305-4856**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal

Drive, Arlington, VA, Sixth Floor (Receptionist).

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Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

B. S. B. S.

8/05/2003


VILE
PRIMARY EXAMINER